POLICY RESEARCH WORKING PAPER 1521

Political Regimes, Trade, and Labor Policies in Developing Countries

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Authoritarian systems that repress labor are more likely than democratic systems to adopt inefficient labor policies inimical to development. The more open the trade regime, the fewer distortions in the labor market.

Background paper for World Development Report 1995

The World Bank
Office of the Vice President
Development Economics
October 1995

Summary findings

What, if any, is the link between labor market policies that benefit insiders — for example, regulations guaranteeing high minimum wages and strict job security — and political regimes.

Is it true that in a democracy outsiders vote and impose limits on what insiders can achieve, whereas in a dictatorship the government need worry only about insiders who have real power?

Or are democratic governments more likely to succumb to trade union pressure and use labor policies to give them special privileges?

To test these competing hypotheses, Banerji and Ghanem designed a two-sector political economy model that demonstrates that labor market distortions depend directly on the trade regime: The more open the trade regime, the fewer distortions in the labor market.

They use cross-country regressions to test the relationship between political and civil liberties and trade and labor policies. Using data for 90 developing countries, they apply existing indices of openness and political freedom and two different constructed measures of labor market distortion.

Their conclusion, based on the regression results: Authoritarian systems that repress labor are more likely than democratic systems to adopt inefficient labor policies inimical to development.

This paper — a product of the Office of the Vice President, Development Economics — was prepared as a background paper for *World Development Report 1995* on labor. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hafez Ghanem, room H5-163, telephone 202-458-5557, fax 202-676-0652, Internet address hghanem@worldbank.org. October 1995. (30 pages)

Political Regimes, Trade and Labor Policies

in Developing Countries

Arup Banerji and Hafez Ghanem

We are grateful to Claudio Montenegro for excellent research assistance and to Joseph Ryan for providing us with the Freedom House data on political and civil liberties. We benefited from discussions with other members of the core team for World Development Report 1995: Michael Walton, Alejandra Cox Edwards, Ishac Diwan, David Lindauer, Ana Revenga and Michal Rutkowski.

Contents

1. Introduction

The link between the political system of a country and its economic growth has attracted a great deal of attention in recent years.[1] Empirical studies have yielded mixed results. Authors from Friedman (1962) to Scully (1988) have argued that politically open societies grow at much faster rates than do societies where freedoms are restricted. On the other hand, others such as Kormendi and Meguire (1985) have found a negative relationship between civil liberties and growth; one reason for this, summarized by Barro (1994), is that more political freedom may also entail a greater role for interest groups in the legislative process, which may in turn act to retard growth.[2] The general finding from this literature is best summarized by Landell-Mills and Serageldin (1991): benevolent dictators are rare but democracies often resort to populist policies that are inimical to growth.

This paper has a narrower focus: it only considers labor market policies. What, if any, is the link between such policies and political regimes? Many governments in developing countries have adopted labor policies—including high minimum wages, public sector overemployment and tough job security regulations—which may benefit a small group of "insiders" who already have modern-sector jobs. But these same policies hurt "outsiders" by limiting their opportunities for better employment, and thus have a negative impact on income distribution. In addition, these labor market distortions can lead to efficiency losses and may discourage investment and growth. Governments usually adopt those policies for political rather than economic motives. Hence, the question we address here is whether the probability of

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[1] For an extensive survey of the literature see Alesina and Perotti (1994).

[2] In a theoretical paper Azam (1994) takes a different approach. He argues that if democracy provides positive utility, then at the margin one would expect it to be negatively correlated with output.

government intervening in the labor market to benefit "insiders" is at all related to the nature of the regime. Are authoritarian regimes or democratic ones more likely to succumb to interest group pressure and use labor policies to give these groups (especially organized labor) special privileges?

In this paper, we use data for ninety developing countries in an attempt to draw general lessons, and to link the probability of governments adopting different policies to the nature of the political regime. The paper is divided into six sections. After this introduction, section 2 presents a general discussion of the possible links between political structure and labor policies. A more rigorous exposition of the underlying analytical model is presented in section 3. Section 4 derives estimating equations and describes the data used, and section 5 presents the results of the empirical tests. Section 6 summarizes our conclusions.

2. Political systems and labor policies

The existing literature linking economic growth to political regimes mostly avoids an exact definition of "democratic" and "authoritarian". This is understandable, considering that the two terms are inexact at best when applied to the range of political systems existing in the world today. While realizing that authoritarianism and democracy exist in a continuum (a fact that we explicitly build into our empirical work), our understanding of the terms is, perhaps, closest to the way they have been used by Przeworsky (1991). He notes that: " ... authoritarian regimes abhor *independent* organizations; they either incorporate them under centralized control or repress them by force" (p. 55, emphasis added).[3] Less authoritarian (and thus more

[3] Przeworsky's definition of democracy is pithier: "Democracy is a system in which parties lose elections." (Przeworsky 1991, p. 10). He does go on to discuss how the key feature of democracies is that they are populated by collective organizations (p. 12).

democratic) societies allow freer participation by independent organizations into the political process.[4]

With this as background, one could develop two sharply contrasting viewpoints about the whether efficient labor market policies—defined as market-determined wages and employment levels—are more or less likely to occur under more authoritarian regimes. Apparent support for both views can be provided by country examples.

One view is that authoritarianism, and the associated labor repression, is sometimes needed to offset rent-seeking behavior by potentially powerful trade unions. According to this notion, freer societies are susceptible to inflated "insider" wages, strikes and other forms of industrial unrest, and lower investment and employment creation. This is because high levels of civil liberties permit trade unions to agitate for above-market rents; moreover, with contestable political systems, these rents are likely to be granted to the unions, to nullify their political opposition. Hence, this viewpoint concludes that authoritarian societies, better able to discourage rent-seeking activities by free unions, are more compatible with labor market efficiency.

This view can be supported by examples from Chile, Korea, Singapore, and Turkey in the 1970s and early 1980s. At various times during these two decades, authoritarian regimes in these countries repressed trade unions and denied basic rights to workers. Yet, during the years of repression, Korea, Singapore, and Turkey experienced spectacular growth in the manufacturing sector and an increasing demand for labor. Rising profitability and labor demand in

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[4] At one extreme, the only organizations allowed free association may be relatively harmless ones: Przeworsky (1991, p. 54n) gives the examples of stamp collectors' societies and producer's associations. But a free press, free trade unions and truly contesting political parties are permitted by only the most democratic regimes.

manufacturing increased the welfare of workers as a whole. Although similar results were not immediately apparent during Chile's authoritarian phase, it is believed that the labor reforms undertaken during authoritarian rule laid the foundation for the strong resurgence of the Chilean economy in the 1990s.

Examples of democracies which adopted poor labor market policies can be used to lend further credence to this argument. In India, long considered one of the few stable democracies in the developing world, labor market distortions have been common. Consider the example of coal miners, who are highly unionized, and mostly concentrated in Bihar, one of India's most populous and politically important states. A measure of their political power is demonstrated by the fact that during the period 1972-85, they enjoyed large jumps in their real wages just in the years before national elections (Banerji and Sabot 1994). Inefficient labor laws were also prevalent in democratic Peru during the 1980s. For instance, workers enjoyed an extreme form of income security, with labor stability guaranteed by the constitution—no workers could be dismissed or even made to retire. This law was enacted because, in order to hold onto power given Peru's volatile politics, the various democratic rulers required the support of urban labor unions. Over the years, democracies as diverse as Trinidad and Tobago, Sri Lanka and Senegal have given large economic rents to their unionized employees.

The contrasting view is that the probability of governments passing inefficient labor legislation to benefit "insiders" is actually higher under authoritarian regimes. Authoritarian regimes are often subordinate to the special interests that let them hold on to power (Ames 1987). Lacking the broader base of more democratic governments, such regimes may use labor policies to acquire support from powerful groups such as the urban labor elite. An important difference

between democratic and authoritarian regimes is the degree of outsider influence. In a well-functioning democracy outsiders vote and impose some limits on what narrower interest groups can achieve. But in a dictatorship the government need only worry about those groups who have real power. Since power is less evenly distributed than votes, insider groups have a greater say in dictatorships.

Support for this view comes from the fact that labor market distortions persist in many non-democratic countries. Sub-Saharan Africa provides many examples. Overstaffing in the public sector, high minimum wages, and restrictions on firing—policies introduced in Congo, Kenya, Sudan, Tanzania, and Zambia in the 1960s—reflected political realities. Authoritarian post-independence governments in these countries needed to appease urban populations to avoid political unrest. Labor market policies established a system that placated urban interests at the expense of millions of poor, informal, and rural workers. The phenomenon of authoritarian regimes succumbing to interest group pressure is not limited to Sub-Saharan Africa. In Egypt in the 1950s and 1960s, President Nasser needed the support of the urban middle class, and guaranteed their children a public sector job upon college graduation. In Bangladesh in the 1980s, General Ershad needed the support, or at least non-opposition, of the labor elite represented by SKOP, an organization of trade unions. He negotiated with SKOP and agreed to increase public sector wages and double severance pay, allowances, and nonwage benefits.

While there are numerous developed countries which have relatively efficient labor markets, there are not many good examples of long-lived democracies with good labor policies in the developing world. But a few examples do stand out. Hong Kong, even though it is a colony, has long had a democratic system of local government and free trade unions, and has maintained

very flexible and competitive labor markets. Chile's move to democracy and trade union freedom has not led to any change in labor policies, and labor regulations in Chile continue to avoid providing rents for insiders. The end of repression in Korea in 1987 was initially associated with very contentious industrial relations. However, since 1990, collective bargaining has become an established institutional arrangement, with no negative impact on the functioning of the labor market and on wage competitiveness.[5]

The paucity of examples of countries with free political systems as well as good labor markets may merely reflect the fact that freedom is a relatively new phenomenon in the developing world. However, with the increasing number of these countries adopting more participatory political systems, the question of whether such systems will enhance or worsen the operation of their labor markets becomes even more pertinent.

3. An analytical framework

We design a simple analytical model that helps illustrate the two competing arguments. A static two-sector political economy model similar to Grossman and Helpman (1994) is developed. In this model, agricultural workers are not covered by any labor legislation. Urban workers, however, are unionized and attempt to influence the government to enact policies—such as minimum wages—favorable to them. Manufacturing sector employers, who own the fixed factor of production, also attempt to influence policies—such as trade protection—which raise their profits. We use the model to derive two estimating equations: one determining

[5] Botswana and Mauritius can be considered as two other examples of free polities with less distorted labor market policies.

the level of protection in the economy and the other the concession (or mark-up) given to the unionized workers.

We assume that there are three groups in the economy, with the total population normalized to one:

$0 < l < 1$ unionized urban laborers

$0 < k < 1$ capitalists

$a = (1 - l - k)$ rural (agricultural) laborers

The economy has two goods—a non-manufactured good x, and a manufactured consumption good c.

Production. In both the agricultural and urban informal sector, the good x is produced with labor only, at a wage normalized to one:

$$x = f(a) = a$$

The informal sector uses those urban workers who are unemployed. Thus, urban workers have a "floor" wage of one, which can be considered to be the supply price of labor in the economy. In the manufacturing sector, quantity Q of the good c is produced with labor $L \leq l$, and a fixed amount of capital K owned by the capitalists:

$$Q = F(L, K)$$

Profits accrue to the employers, or capitalists. Profit maximization by manufacturing firms is on the basis of the domestic price of the good, p (which differs from the world price p^* by the amount of the tariff) and the prevailing manufacturing wage rate, w (which can be influenced by the government through minimum wage and other legislation). Profit maximization yields:

$$Q = Q(p, w)$$

and

$$Q_L = (w/p); \quad L_p = -(w/p)L_w; \quad Q_p = (w/p)L_p; \quad Q_w = (w/p)L_w \qquad (1)$$

(subscripts denote partial derivatives).

Tariffs. The government sets tariff τ on imports of the manufactured good, by setting the domestic price $p = (p^* + \tau)$. Tariff revenues R are (as in Grossman and Helpman 1994) redistributed evenly to every individual in the economy. Since the population is normalized to one, each individual receives an amount R. Since imports of the good are given by $(c - Q)$, and $c = c(p)$ (see later),

$$R(p, w) = (p - p^*)[c(p) - Q(p, w)] = \tau[c(p) - Q(p, w)]$$

Using (1), we get:

$$R_p = (c - Q) + \tau[c_p - (w/p)L_p]$$

$$R_w = -\tau (w/p)L_w \qquad (2)$$

Incomes. The three groups are superscripted by A, L and K for agricultural workers, urban labor and capitalists respectively. Employed manufacturing workers and the capitalists are forced to pay a "tax" v to the government out of their incomes (this is explained in greater detail below). Each member of the unionized labor and the capitalists also pay contributions (or bribes), denoted as b^j $(j = L, K)$, to the government in an attempt to influence policy (as in Grossman and Helpman 1993 and Rama and Tabellini 1994). The contribution from each of the two groups is a mapping with the prevailing policy parameters—the wage and the domestic price (affected by the tariff set by the government).

Post-contribution incomes for each individual in the groups are:[6]

$$y^A = 1 + R \tag{3a}$$

$$y^L = (1 - v)\{1 + (1/l)\,[(w-1)L]\} + R - b^L(p,w) \tag{3b}$$

$$y^K = (1 - v)(1/k)(pQ - wL) + R - b^K(p,w) \tag{3c}$$

Individual utility and welfare implications of policy. Each individual in the economy consumes two goods—the primary good x and the manufactured good c. Individual utility maximization for individual i is given by:

$$\text{Max } u^i = x^i + v(c^i)$$

$$\text{s.t. } y^i = x^i + pc^i$$

This gives us $c^i = c(p)$ for all consumers, and the partial derivatives:

$$u^i_p = y^i_p - c; \qquad u^i_w = y^i_w \tag{4}$$

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[6] Equation (3b) is derived from the fact that, with probability L/l, urban workers receive wage $(1 - v)w$, while with probability $(1 - L/l)$, their wage is just $(1 - v)$ (as in Rama and Tabellini 1994).

The change in the pre-contribution welfare of individuals in each group with changes in policy variables can then be calculated using (2) and (3).

For agricultural workers:

$$u^A_p = R_p - c; \qquad u^A_w = R_w \tag{5a}$$

For manufacturing labor:

$$u^L_p = (1/l)(1-v)(w-1)L_p + R_p - c; \qquad u^L_w = R_w + (1/l)(1-v)[L + (w-1)L_w] \tag{5b}$$

For the capitalists:

$$u^K_p = (1-v)(1/k)Q + R_p - c; \qquad u^K_w = -(1-v)(1/k)L + R_w \tag{5c}$$

Urban labor and capitalists each optimize their political contributions until the marginal effect of the contribution on policy equals the marginal increase in their own welfare from the same policy:

$$\begin{aligned} u^L_p &= b^L_p \quad ; \; u^L_w = b^L_w \\ u^K_p &= b^K_p \; ; \; u^K_w = b^K_w \end{aligned} \tag{6}$$

The government. The government sets the policy parameters. Its objective may not be to merely act as a social planner which maximizes national welfare, but in addition, to ensure that it remains in power. This second purpose is motivated in our model by presuming that if the government is in power, it can extract rent from the formal sector's product—i.e., it can charge the "tax" v, introduced earlier, on the incomes of employed labor and the capitalists. For the time being, we assume that v is a given for the economy, and measures a particular

government's "venality".[7] $v = 0$ indicates a purely altruistic social planner, and $v = 1$ indicates a totally confiscatory regime.

We also assume that the probability of the government maintaining its power is affected by non-policy actions which the government may take—for example, election campaigns or maintaining a military. These actions are financed by the political contributions it receives from labor and the capitalists (which can, of course, be also thought of as proxies for the degree of support these groups provide to the government).

The government thus maximizes its objective function Γ, where

$$\Gamma = W + V \tag{7a}$$

where:

$$W = k\,u^K(p,w) + l\,u^L(p,w) + a\,u^A(p,w) \tag{7b}$$

$$V = \pi(B)\,v[\,pQ(p,w)] \tag{7c}$$

$$B = s^L b^L(p,w) + s^K b^K(p,w) \tag{7d}$$

W represents pure aggregate welfare of individuals in the economy. V, on the other hand, is a term that captures the expected rents to a non-altruistic government from staying in power. As discussed, the rents amount to a tax v on the value of manufacturing production. Note that when $v = 0$ (the government is non-venal), $V = 0$ and thus $\Gamma = W$—the government only maximizes aggregate welfare.

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[7] This assumption can be relaxed and the conditions under which the venality may be partly endogenous can be easily explored. For the purposes of this paper, however, it is sufficient to treat v as exogenous.

π indicates the probability that the government will stay in power in order to enjoy the rents (in this static model, it may also be thought of as the number of years that the government believes it will be in power). This probability is assumed to increase with larger political contributions from urban groups, i.e., $\pi'(B) > 0$, as the government is assured more tangible and intangible political support from the interest groups. However, for a given government, the contributions from the capitalists and labor may not have equal value: their relative importance in the particular polity are measured by the shares s^L and s^K, with $1 \geq s^L \geq 0$, and $s^K = 1 - s^L$.[8]

The government maximizes Γ with respect to its policy parameters p and w

Using (1), the first order conditions are:

$$\Gamma_p = W_p + V_p = W_p + V[(\rho/B) B_p + (1+\gamma)/p] = 0 \qquad (8a)$$

$$\Gamma_w = W_w + V_w = W_w + V[(\rho/B) B_w - (\gamma/w)] = 0 \qquad (8b)$$

where $\rho = B\pi'(B)/\pi$ measures the elasticity of the probability of remaining in power with respect to political contributions; $\gamma = pQ_p/Q$ is the price elasticity of production (i.e., the supply elasticity) of the manufactured good.

Calculating the values of W_p, B_p, W_w and B_w from (7b) and (7d), using (1), (2) and (6) and simplifying the simultaneous equation system that results, we get the government's optimal tariff and manufacturing wage premium in equilibrium:[9]

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[8] Rama and Tabellini (1994) use such a model to explore the behavior of "leftist" and "right-wing" governments.

[9] The simultaneous equations are:

$$\frac{\tau}{p}=\left[\frac{Q/c}{\eta}\right]\left[1-\frac{(1-v)}{\sigma}\left\{S^K+(\gamma/\lambda)(S^L-S^K)\right\}-\frac{V}{\sigma pQ}\left\{1+\gamma(1+Q)\right\}\right] \qquad (9)$$

$$\left(\frac{w-1}{w}\right)=\frac{1}{S^L}\left(\frac{\sigma}{(1-v)}\frac{\tau}{p}+\frac{V}{(1-v)p}+(1/\lambda)(S^L-S^K)\right) \qquad (10)$$

where $S^J = (V\rho/B)s^J$, $J = L, K$ (so that when $v = 0$, so is S^J). We have also defined $[1 + kS^K + lS^L] = \sigma$.(when $v = 0$, $\sigma = 1$). Finally, we have used two elasticity measures to simplify the equations. $\eta = pc_p/c$ is the price elasticity of consumption, and $\lambda = (wL_w)/L$ is the wage elasticity of labor demand in manufacturing.

Equations (9) and (10) demonstrate a common feature of this class of models. As (9) shows, the government makes its decision about the degree of openness in the economy independent of the wage decision. Since Q and c are endogenous, the decision on the level of protection is a function of variables relating to the structure of the economy (η, γ and λ), and political variables summarized by V, σ and the S's.

This simple model also predicts that government only interested in maximizing welfare, i.e., one which is "non-venal," will set tariffs at zero.[10] However, if staying in power and collecting rents are also in its objective function, it would impose tariffs and create a wedge between domestic and foreign prices. The size of the tariff will depend upon government's

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$[1 + kS^K + lS^L]\,(\eta c - \gamma Q)\,[\tau/p] - [1 + kS^K + lS^L]\,Q + (1-v)[1+S^K]Q$
$+ (1-v)[1+S^L]\,\gamma Q\,[(w-1)/w] + V(1+\gamma)/p = 0$

$[1 + kS^K + lS^L]\gamma Q[\tau/p] + (1-v)[S^L - S^K](w^L/p) - (1-v)\,[1+S^L]\,\gamma Q\,[(w-1)/w] + V\gamma/p = 0$

[10] Non-venality implies $v = 0$, and thus $V = 0$. The last term in (9) drops out. Since the S's are equal to one, as is σ, the second term becomes one, and $\tau/p = 0$.

preferences, the power of interest groups and economic factors, such as the price elasticity of imports, that determine the relationship between tariff changes and changes in revenue.

The wage distortion depends directly on the trade regime. Specifically, if the economy decides to adopt freer trade policies (i.e., τ is low), the optimal wage distortion will also be smaller. One intuitive way of thinking about this is to consider that the government first decides on the total excess rents in the economy that is optimal for it, and then makes a decision about the allocation of this rent among organized labor and the capitalists based on the relative importance of the two groups. As before, the manufacturing sector wage premium in equilibrium is zero if the government is non-venal.[11]

4. Estimating equations and data

The above discussion highlights the key variables determining government decisions to intervene in the goods and labor markets, and indicates the size of the intervention. However, it does not tell us how those variables would change in response to the *nature* of the regime. For example, equations (9) and (10) imply that as the importance it attaches to organized labor (S^L) increases, the government will impose more trade restrictions and raise the minimum wage. However, the model has nothing to say about whether S^L is generally higher under authoritarianism or under democracy. This is the empirical question that we now turn to.

We are interested in estimating equations for the level of trade protection (τ/p) and the wage distortion: $(w\text{-}1)/w$. However, data on wages for a large number of developing countries are difficult to obtain and, more seriously, may be of questionable quality. Therefore,

[11] If $v = 0$, the second and third terms drop out, and, since τ is zero, so is the wage premium.

we also consider a measure of labor market distortion other than wages: the proportion of workers employed in the formal sector, L. From the model, this is negatively related to the wage distortion, with higher formal wages leading to a decline in output and employment in that sector, pushing more workers into agriculture and other informal activities. We feel that estimating an additional equation with L rather than $(w\text{-}1)/w$ as the explanatory variable is one way of testing the robustness of our conclusions.

Equation (9) can be written in a more general form as follows:[12]

$$\tau = \mathbf{f}\,(Q, c;\quad \eta, \gamma, \lambda, p^*;\quad l, k, S^L, S^K, v, \pi) \tag{11}$$

This is a structural equation presenting the average tariff rate as a function of two variables that are endogenous to the model (output of the industrial good and consumption—Q and c), four exogenous economic variables (the price elasticities of consumption and production and the wage elasticity of the demand for labor, as well as the international price of the industrial good—η, γ, λ and p^*), and six exogenous political variables (the tax rate, the relative importance of urban labor and the capitalists and the weights the government attaches to them, as well as the number of years the government expects to remain in power—v, l, k, S^L, S^K and π). The reduced form equation will be:

$$\tau = \mathbf{f}_1\,(\eta, \gamma, \lambda, p^*, v, l, k, S^L, S^K, \pi) \tag{12}$$

Similarly, equation (10) can be written in general form as:

$$(w\text{-}1)/w = \mathbf{g}\,(\tau, v;\quad p^*, \lambda;\quad l,k, S^L,S^K, \pi) \tag{13}$$

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[12] Note that we made use of the fact that $p=p^*(1 + \tau)$.

and the reduced form is:

$$(w\text{-}1)/w = \mathbf{g}_1\,(\eta, \gamma, \lambda, p^*, v, l, k, S^L, S^K, \pi) \qquad (14)$$

Since τ is predetermined with respect to the wage distortion, equation (13) can be estimated using ordinary least squares.

We estimate equations (12)-(14) using cross sectional data for 90 developing countries.[13] For a measure of trade distortion, τ, we started by using the work of Dollar (1992) who estimates a measure of an economy's openness to trade for a large number of counties. This index—which we shall refer to from here on as DOLLAR—rises as the level of protection increases. Since this index is available only for 1990, our analysis using DOLLAR is limited to cross sectional work for that year.

However, DOLLAR, like most other measures of openness, does have some shortcomings. Pritchett (1991) shows that alternative objective measures of openness produce very different country rankings, and argues that the probability of deriving a single straightforward measure that produces a "correct" ranking of countries is very low.[14] Obviously, we do not attempt to find such a measure, but we experiment with using alternatives to DOLLAR to check the robustness of our conclusions. Three alternatives were used: the mean frequency of non-tariff barriers on manufacturing goods (MNTB), the mean of total import charges on manufacturing goods (TARIFF), and the black market premium (BMP).

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[13] Since some data is missing for some countries the actual number of observations varies from one regression to the other depending on the availability of the variables included in the regression.

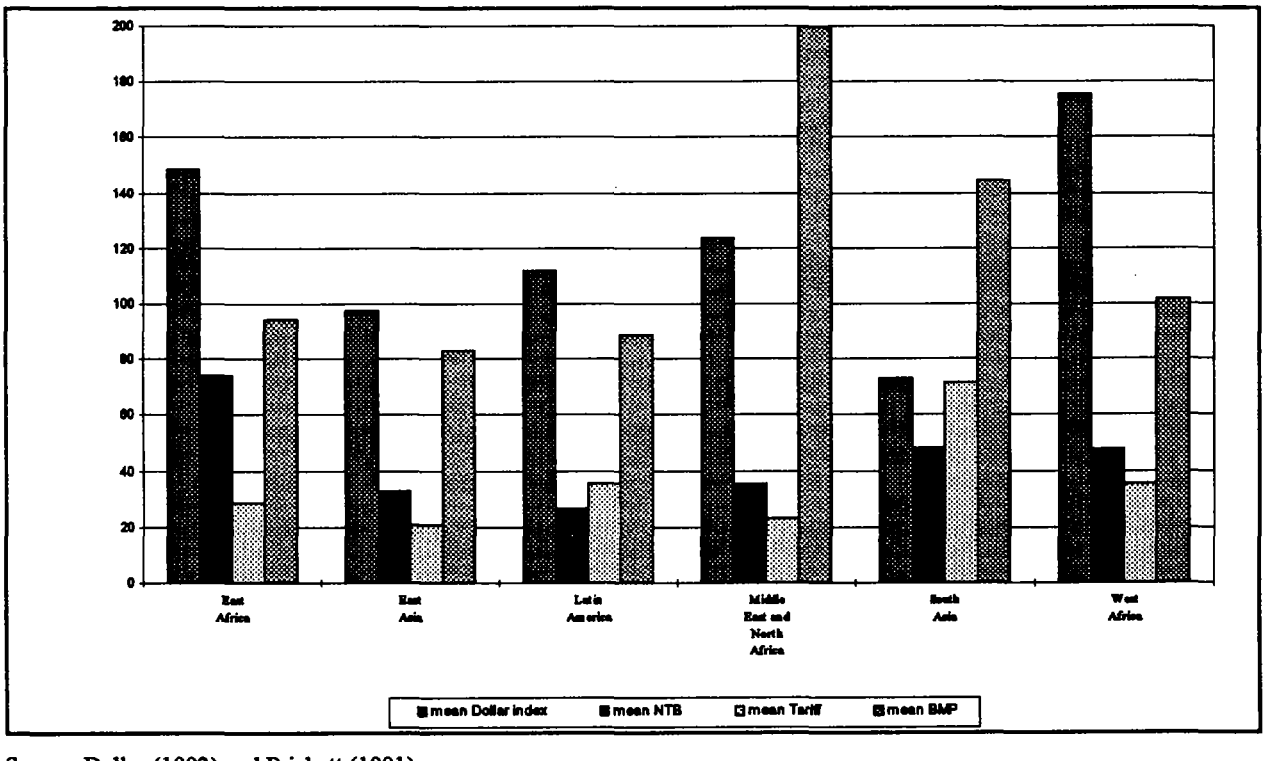
[14] For further analysis of this question see Leamer (1988) or Harrisson (1991).

Table 1 shows the correlation coefficient between the different openness measures. They are not highly correlated, with correlation coefficients ranging from a high of 0.37 for MNTB and BMP to a low of -0.21 for the DOLLAR index and TARIFF. The difficulty of choosing a measure of openness is demonstrated by Figure 1, which shows the average of each measure for seven groups of low and middle-income countries. According to the DOLLAR index, trade distortions were highest in West Africa, followed by East Africa, and were lowest in South and East Asia. As the figure shows, regional rankings change dramatically when other measures are used.

Table 1 Correlation coefficients between different openness measures

	DOLLAR	NTB	TARIFF	BMP
DOLLAR	1.00			
NTB	0.08	1.00		
TARIFF	-0.21	0.23	1.00	
BMP	0.21	0.37	0.08	1.00

Figure 1 Measures of openess (1990)



Source: Dollar (1992) and Prichett (1991).

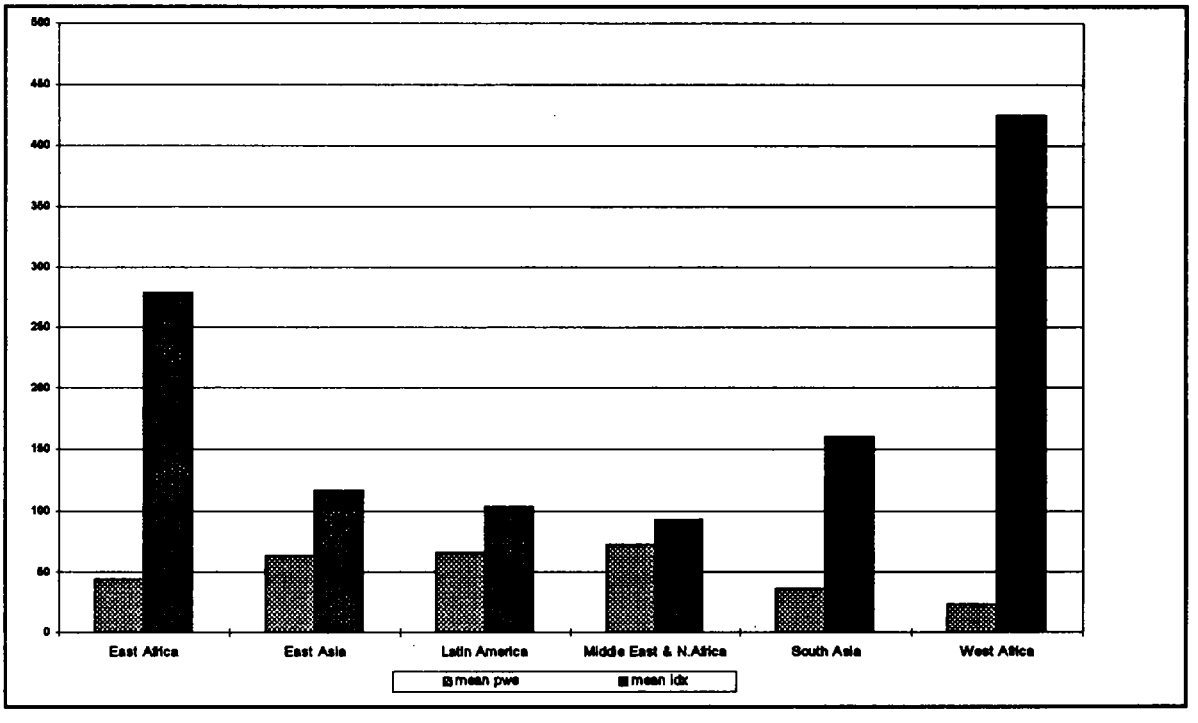
We rely on DOLLAR as our primary measure and use the others for "sensitivity" analysis, because it provided us with the largest number of consistent cross country observations for a fairly recent year, 1990. We could not use some of the other appealing measures of openness—like the one developed by Leamer (1988)—for sensitivity analysis, because of the small number of observations for low- and middle-income countries.

Measuring labor market distortions and the degree of protection to "insiders" is also a difficult empirical task. Ideally, we would have liked to use the ratio of formal to informal or rural wages, adjusting it for different worker characteristics. Once again, however, the data is unavailable for a large number of countries. Hence, we used as the numerator the average wage of an unskilled worker in manufacturing (which we obtained from the ILO data base), assuming that unskilled workers will have characteristics that resemble those of informal workers. Finding a suitable denominator was even more problematic, because the informal sector wage rates are unavailable for many countries. Instead, we had to use non-manufacturing GDP per worker as proxy for the informal wage rate. Thus, our wage distortion index (IDX) is simply the ratio of the manufacturing wage rate to the non-manufacturing value added per worker. An increase of this index is taken to imply greater distortions and more privileges for insiders. Given the uncertainties surrounding the calculation of IDX, we decided, as discussed earlier, to use a second measure of labor market distortion: the proportion of workers in wage employment (PWE).

Figure 2 shows the mean values of the two measures of labor market distortions for different groups of low- and middle-income countries. As expected, the two measures are negatively correlated—a high wage distortion, measured by IDX, is associated with a smaller formal sector and thus a lower PWE. West and East Africa, followed by South Asia, have the

highest wage distortion and the smallest proportion of wage employment. Eastern Europe and Central Asia, for obvious historical reasons, have the largest proportion of formal employment.

Figure 2 Measures of labor market distortions (1990)



Source: World Bank data.

We now consider the explanatory variables relating to economic structure. We assume that the three elasticities—η, γ, λ—will vary across countries depending on their levels of development. Therefore, we proxy them by per capita GDP and the level of education—measured below by the secondary school enrollment rate.[15] The international price level is taken to be the same for all countries and hence not included as a separate explanatory variable.

[15] Except for Africa, the primary school enrollment rates show very little variability across countries. That is why we preferred to use secondary enrollment. We also ran our regressions using the primary enrollment rate, as a test of robustness, and our conclusions did not change.

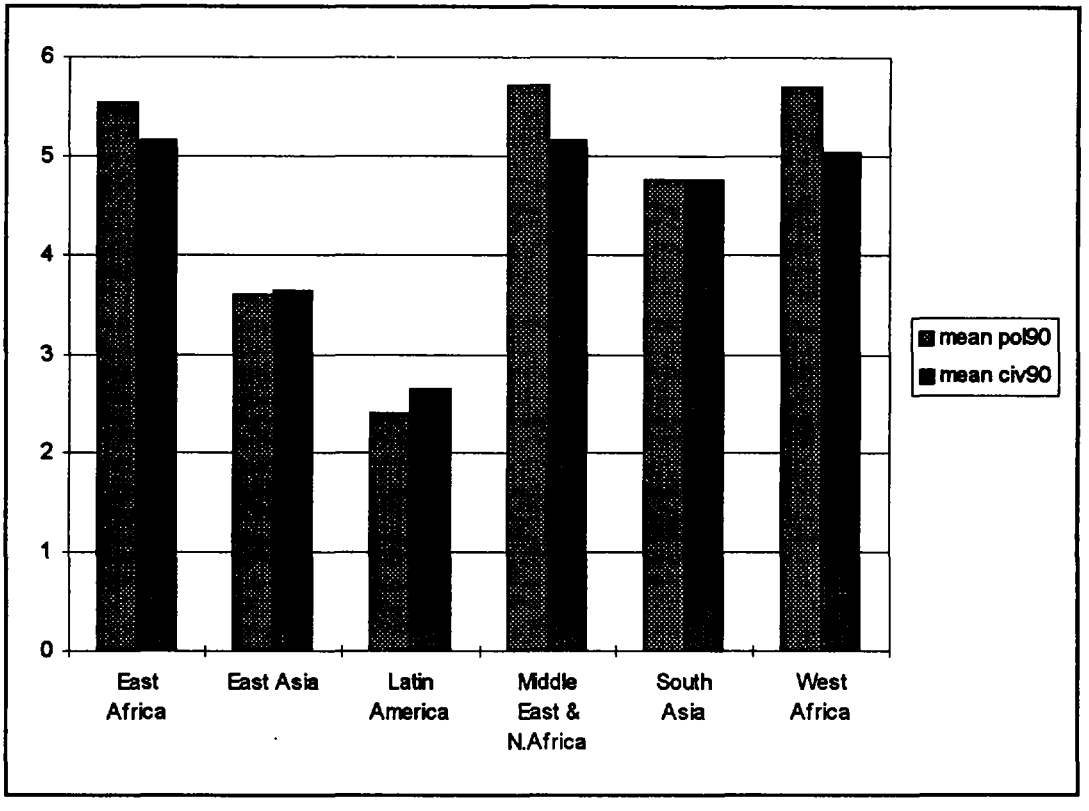
Measures of political structure were obtained from various sources. The tax to GDP ratio was obtained from the IMF statistics. We use the rate of urbanization as a measure of the relative importance of urban formal labor. Ideally, we would also have liked to get a separate measure for the weight of the capitalists in the population. But this is impossible to obtain for most countries. Moreover, the importance and power of the capitalists is not necessarily related to their relative numbers. We assumed that the importance of the capitalists is an endogenous variable which depends upon the political regime and do not include it in the reduced form equation.

We argue that the weight governments give to formal workers and the capitalists as well as their expected longevity (S^L, S^K and π) will depend upon the nature of the regime. The type of regime was classified using the indices for political rights (POL) and civil liberties (CIV) compiled by the group Freedom House. These indices range from 1 to 7, with 1 indicating the most rights and liberties and 7 the least. As defined by Freedom House, "political rights enable people to participate freely in the political process", and "civil liberties are the freedoms to develop views, institutions and personal autonomy apart from the state" (Ryan 1994, p. 671).

In practice, political and civil liberties go hand in hand. Figure 3 presents regional averages for the two Freedom House indices, and shows the high positive correlation between them—for the year 1990, we calculated the correlation coefficient between the two indices to be 0.92. In our regressions, we used the two indices interchangeably, with very little differences in results. The figure also indicates that on average countries in Sub-Saharan Africa and in the

Middle East and North Africa have the lowest levels of political and civil liberties, while Eastern Europe and Central Asia and Latin America have the highest levels of liberties.

Figure 3 Measures of political and civil liberties (1990)



Note: Lower values for POL and CIV indicate higher levels of rights and liberties
Source: Freedom House

On the basis of the preceding discussion, we estimate three equations. Equation (15) is derived from (12), and considers trade distortions. The next two equations examine labor market distortions: (16) is derived directly from (14), and (17) is a variant using the alternative measure of labor market distortion, PWE:

$$\text{DOLLAR} = \alpha_0 + \alpha_1 \text{GDP per capita} + \alpha_2 \text{ urbanization} + \alpha_3 \text{ education} + \alpha_4 \text{ tax rate} + \alpha_5 \text{ POL} + u_1 \qquad (15)$$

$$IDX = \beta_0 + \beta_1 \text{ GDP per capita} + \beta_2 \text{ urbanization} + \beta_3 \text{ education} + \beta_4 \text{ tax rate} + \beta_5 \text{ POL} + \beta_6 \text{ DOLLAR} + u_2 \quad (16)$$

$$PWE = \delta_0 + \delta_1 \text{ GDP per capita} + \delta_2 \text{ urbanization} + \delta_3 \text{ education} + \delta_4 \text{ tax rate} + \delta_5 \text{ POL} + \delta_6 \text{ DOLLAR} + u_3 \quad (17)$$

The test of our two competing hypotheses of whether democratic or authoritarian regimes are more prone to have distortionary labor policies consists of testing for the signs of α_5, β_5, β_6, δ_5 and δ_6. If democratic regimes that do not repress labor are more likely to achieve better labor market outcomes, this implies that α_5 and β_5 should be positive and δ_5 negative—i.e., regimes with more political freedom tend to have fewer restrictions on trade, which in turn implies a smaller spread between formal and informal workers and a relatively larger proportion of the labor force in formal employment. Our analytical model also indicates that under both hypotheses the sign of β_6 and δ_6 should be positive: labor market distortions cannot persist if the product markets are competitive.

5. Empirical results

Table 2 shows the parameter estimates for equation (15). We start by including both the political and civil liberties indices as explanatory variables. The political liberties index is positive and slightly significant, indicating that countries with less political freedoms tend to have more closed trade regimes, but the civil liberties index is insignificant. This result is not particularly surprising, since the two indices are so highly correlated. When we drop the civil liberties index, the political index becomes much more significant (second row). The other variable that appears to be highly significant is education, with countries that have a more

educated labor force tending to be more open. Surprisingly, GDP per capita, the tax to GDP ratio and urbanization all appear to be unrelated to openness. When experimented with dropping some variables and with using the civil liberties index instead of the political index, the result did not change. In general, countries with more political rights and civil liberties appear to have less trade distortions.

Table 2 Regression results: dependent variable is dollar index of openness

Const.	GDP/ capita	Urbanization	Education	Tax rate	Political rights	Civil liberties	No. of obs.	R^2
107**	-0.0	0.3		50.2	9.1*	-5.6	71	0.24
(4.7)	(-0.6)	(1.0)		(0.76)	(1.8)	(-0.8)		
98.2**	-0.0	0.3	-2.7**	63.4	5.4**		71	0.24
(5.0)	(-0.5)	(1.0)	(-2.3)	(1.0)	(2.16)			
111**	-0.0		-2.4**	40.2	5.1**		82	0.18
(7.6)	(-0.1)		(-2.1)	(0.7)	(2.0)			
97**	-0.0			44.1	7.1**		82	0.18
(8.2)	(-1.0)			(0.8)	(2.9)			
100**	-0.0				7.6**		90	0.18
(8.2)	(-1.0)				(3.4)			
101**	-0.0					8.0**	90	0.14
(6.8)	(-1.1)					(3.0)		

Notes:
— An increase in the dollar index implies greater restrictions on trade
** significant at the 5% level
* significant at the 10% level
— numbers in parentheses are t-statistics
— the education variable is defined as the secondary school enrollment rate

The robustness of the above conclusion was tested by re-estimating all of the equations presented in Table 2 using MNTB, TARIFF and BMP as dependent variables. The results for MNTB and BMP are quite similar to the ones obtained for the DOLLAR index, with the coefficient on POL being positive and significant. However, the use of TARIFF as a measure of openness changes our conclusion. The coefficient on POL in the TARIFF equation is insignificant and has a negative sign. Table 3 illustrates those conclusions by presenting the estimates for the most general form of equation (15) with MNTB, TARIFF and BMP as dependent variables.

Table 3 Sensitivity to choice of openness measure

Depend. variable	Const.	GDP/ capita	Urbanization	Education	Tax rate	Political rights	No of obs.	R^2
MNTB	26.7	-0.00	-0.04	0.31	-46.4	8.0**	48	0.24
	(1.2)	(-0.5)	-(0.13)	(0.22)	(0.6)	(2.7)		
TARIFF	64.3	-0.00	-0.02	0.53	-94.4*	-2.6	48	0.19
	(4.2)	(-1.1)	(-0.1)	(0.5)	(-1.8)	(-1.20		
BMP	15.9	0.01	-0/05	9.2	-	47.7**	67	0.23
	(0.14)	(0.4)	(-0.0)	(1.4)	1082**	(2.7)		
					(-2.8)			

Notes:
** significant at the 5% level
* significant at the 10% level
— numbers in parentheses are t-statistics
— the education variable is defined as the secondary school enrollment rate

Estimates of the parameters of equation (16) are presented in Table 4. As predicted by our model, there is a strong positive correlation between the DOLLAR index and the index of wage distortion. However, none of the other parameters is statistically significant. The index of political liberties becomes significant only when the DOLLAR index is dropped from the equation—which is not surprising, since we have already shown that they are highly correlated. Our results now show that in addition to having more trade distortions, authoritarian countries also tend to have more labor market distortions. However, those results, especially the fact that the wage distortion appears to be only affected by openness and political liberties, may simply reflect the weakness of our wage distortion index.

Table 5 shows the estimates for equation 17. They support our previous conclusion concerning the link between openness and labor policy. The parameter on the DOLLAR index is negative and significant, indicating that more closed economies generally have relatively smaller formal labor markets. The parameter on political liberties is also negative, but significant only in equations where the DOLLAR index is dropped, which is probably a reflection of the high

correlation between these two variables. Urbanization and the tax rate enter those regressions with very significant positive coefficients, indicating that countries with high urbanization and tax to GDP ratios also have a relatively larger formal labor market. This is the opposite of what is predicted by the model, and may simply reflect the fact that urbanization and tax revenue are not predetermined with respect to the size of the formal sector. We tried to deal with this by using instrumental variables, with lagged values of the explanatory variables as instruments, but the results did not change (last row of Table 5). Since our concern is with the impact of political liberties and openness on formal employment—and not urbanization and tax policy—we did not pursue this further by looking for better instruments.

Table 4 Regression results: dependent variable is index of wage distortion

Const.	GDP/ capita	Urbanization	Education	Tax rate	Political rights	DOLLAR index	No. of obs.	R^2
0.6	.00	-0.02	-0.04	-2.3	0.1	0.02**	42	0.45
(0.6)	(0.6)	(-1.4)	(-0.8)	(-0.8)	(0.7)	(3.0)		
0.9	0.00	-0.02	-0.04	-2.4		0.02**	42	0.44
(1.0)	(0.5)	(-1.6)	(-0.8)	(-0.9)		(3.5)		
1.9**	0.00	-0.01	-0.1	0.4	0.21*		42	0.32
(2.0)	(0.2)	(-0.8)	(-1.5)	(0.14)	(1.8)			
-0.4	-0.00					0.02**	48	0.26
(-0.4)	(-1.4)					(3.3)		
0.65	-0.00				0.36**		50	0.21
(0.95)	(-0.6)				(2.7)			

Notes:
— An increase in the index implies worse labor market policies
— education is defined as the secondary school enrollment rate
** significant at the 5% level
* significant at the 10% level
— numbers in parentheses are t- statistics

We also experimented with dropping some variables. The results of regressions where we dropped all explanatory variables except GDP per capita and the DOLLAR and political liberties indices are presented in Table 5. In both cases GDP per capita had a positive and significant coefficient. The openness index had a negative coefficient, with a t-statistic that was

just below the 10% critical value. And the political liberties index had a negative and significant coefficient. It appears that countries with less political freedoms have relatively smaller formal labor markets, an indication of greater distortions.

Table 5 Regression results: dependent variable is proportion of labor force in wage employment (results in last row were obtained using instrumental variables)

Const.	GDP/ capita	Urbanization	Education	Tax rate	Political liberties	DOLLAR index	No. of Obs.	R^2
23.6**	-0.00	0.7**	0.3	65.8*	-0.2	-0.16**	50	0.63
(2.1)	(-0.3)	(4.1)	(0.5)	(1.8)	(-0.2)	(-2.5)		
22.9**	-0.00	0.7**	0.3	64.9*		-0.16**	50	0.63
(2.2)	(-0.2)	(4.2)	(0.4)	(1.9)		(-2.6)		
10.0	0.00	0.6**	0.9*	44.2	-0.9		53	0.61
(1.0)	(1.0)	(3.6)	(1.7)	(1.3)	(-0.7)			
50.5**	0.01**					-0.12	60	0.35
(5.2)	(4.9)					(-1.6)		
50.4**	0.00**				-2.7**		67	0.37
(7.8)	(5.12)				(-2.0)			
16.4	-0.00	0.7**	0.01	101**		-0.13**	44	0.59
(1.5)	(-0.8)	(4.3)	(0.0)	(2.7)		(-2.0)		

Notes:
— An increase in the proportion of wage employment is taken as an indication of good labor policies
** significant at the 5% level
* significant at the 10% level
— numbers in parentheses are t-statistics
— the education variable is defined as the secondary school enrollment rate.

We tried re-doing the estimates in tables 4 and 5 using other measures of openness. The results were not as strong. Estimates with MNTB and BMP had the same sign as estimates with the dollar index, but were rarely statistically significant. This may be due to a couple of reasons: either the smaller number of observations for MNTB and BMP, or the fact that the relationship between MNTB and BMP and labor market distortions is not that strong. Estimates using TARIFF were also insignificant, but had the wrong sign—which could have been expected from the correlation coefficients presented in Table 1. Thus, our general conclusion that countries with less liberties tend to have more barriers to trade and more labor market distortions is quite sensitive to the choice of openness measures.

6. Conclusions

Our work provides some support to the view that in general, authoritarian regimes tend to be more subordinate to special interests than regimes with more political and civil liberties.[16] The empirical conclusions support the analysis underlying this view—that in many authoritarian settings, urban labor and owners of capital tend to have greater relative power, since the majority of rural and informal workers are not allowed to vote and cannot organize urban unrest and demonstrations to bring down the government; hence, such authoritarian governments would provide powerful urban groups with special protection through higher tariffs or quotas on imports, and ensure that part of the rent goes to labor by mandating high minimum wages and other labor market interventions. This is the pattern which could be observed in many countries in Sub-Saharan Africa, the Middle East and Latin America in the 1970s and 1980s. Authoritarian governments often repressed labor and only permitted unions subordinate to the regime. They then tried to ensure support for these state-sponsored unions by giving them further concessions and protections. The result may have been outcomes that are inefficient.[17]

Landell-Mills and Serageldin (1992) present the view that freedom of association is one of the elements of good governance, necessary for development. Our work supports that view. Clearly, this does not mean that inequitable or inefficient labor policies are the exclusive domain of authoritarian governments, or that authoritarianism automatically implies bad policies. As we discussed in the introduction, there are numerous individual counter-examples that prove this statement wrong.

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[16] The term subordinate here is used in the sense of Rodrik (1992).

[17] Pencavel (1995) describes a policy framework which maximizes the benefits from unionism (higher productivity and greater equity) and minimizes the costs (monopolistic wage increases).

This paper also follows up on the work by Fields (1994) and Freeman (1993 on East Asia, where they argue that labor repression is neither necessary, nor desirable, for development. Our results are more general, since our attempt is to study a large cross-section of developing countries rather than to carry out a detailed study of a few countries. On the other hand, data limitations and measurement problems render our conclusions less robust.

Our findings, however, are consistent with some of the empirical literature on the link between political systems and economic growth. For example, work by Barro (1991), Ozler and Rodrik (1992) and others have found that worse civil liberties are strongly correlated with lower growth. In a similar manner, undesirable labor market policies act to handicap the process of economic growth, by directly stifling the process of production and capital accumulation. Our conclusion, that authoritarianism and labor repression appear more likely to be associated with less desirable labor market outcomes, points to yet another reason why economies characterized by the lack of political freedoms may have faced lower rates of growth.

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